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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/813,471

03/30/2004

Kirby Jabusch

COR-1082-US

4788

24923 7590 02/08/2007  
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EXAMINER

DANG, HOANG C

ART UNIT

PAPER NUMBER

3672

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

02/08/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

Application No.

10/813,471

Applicant(s)

JABUSCH ET AL.

Examiner

Hoang Dang

Art Unit

3672

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 November 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) 14 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 24-27 is/are allowed.
- 6) ☒ Claim(s) 1, 5-9, 15 and 18-23 is/are rejected.
- 7) ☒ Claim(s) 2-4, 10-13, 16 and 17 is/are objected to.
- 8) ☒ Claim(s) 14 are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 102***

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims 1, 6, 8, 15, 20, 22 and 23 are rejected under 35 U.S.C. 102(a) as being clearly anticipated by Collette (US 2003/0010491) (see Paragraphs [0049]-[0052]).

Contrary to applicant's argument, the controller in Collette does determine whether the fluid level sensor is surrounded by a liquid or a gas based on a differential in the measured parameter of interest, namely, the amount of attenuation of the radiation flux (electron density) (see Paragraph [0043]) or the capacitance (see Paragraph [0044]).

### ***Claim Rejections - 35 USC § 103***

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 1, 5-8, 9, 15, 18, and 20-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Last et al (US 6,547,004) in view of Riddel (US 3,479,875) or Neapolitakis et al (US 3,432,840).

Last et al disclose the invention as claimed (column 2, lines 11-63) except that it is not clear whether level sensors (56, 58) of Last et al are non-mechanical level sensors. However, Last et al disclose in column 4, lines 33-34 that "[s]ensors 56 and 58 can be any sensor from which controller 50 can determine the relative fluid level." It would have been obvious to one of ordinary skill in the art at the time the invention was made to use non-mechanical fluid level

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sensors in Last et al since a fluid level sensor that determines whether the fluid surrounding the sensor is a liquid or a gas based on a differential in the measured parameter of interest, namely, a difference in resistance, is well known and used in the art as evidenced by Riddel (column 1, line 25 through column 2, line 31) or Neapolitakis et al (column 1, lines 20-57).

Contrary to applicant's argument, the fluid level sensor (i.e., thermistor) of Riddel or Neapolitakis et al does determine whether the fluid level sensor is surrounded by a liquid or a gas based on a differential in the measured parameter of interest, namely, a difference in resistance (see column 1, lines 30-33 in Neapolitakis et al for example).

5. Claims 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Collette '491 in view of Erickson (US 4,285,401) or Adamache et al (US 4,988,389).

Collette discloses the invention as claimed except for the step of heating the fluid surrounding the non-mechanical fluid level sensor. However, it is well known in the art to provide a heater in a wellbore to heat and thereby reduce the viscosity of well fluids therein to enhance its production as evidenced by Erickson (see heater 64, 64') or Adamache et al (see heater 17 in Figs. 6A-B). It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide Collette with a downhole heater as claimed in view of the teaching of Erickson or Adamache et al for the advantage pointed out above.

***Allowable Subject Matter***

6. Claims 24-27 are allowed.

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7. Claims 2-4, 10-13, 16 and 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

8. This application contains claim 14 drawn to an invention nonelected with traverse in the Response filed 5/24/2006. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

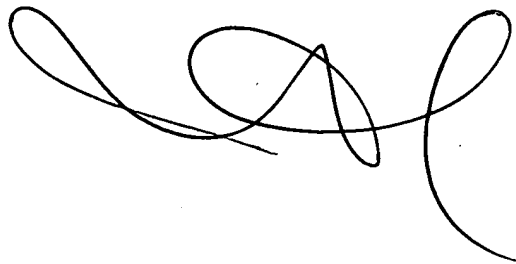
10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hoang Dang whose telephone number is 571-272-7028. The examiner can normally be reached on 9:15-5:45 Monday-Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bagnell can be reached on 571-272-6999. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Hoang Dang  
Primary Examiner  
Art Unit 3672

A handwritten signature in black ink, consisting of several loops and a long horizontal stroke, positioned below the printed name and title.